OIPE IAP6
JUL 30 2007
PATENT & TRADEMARK OFFICE

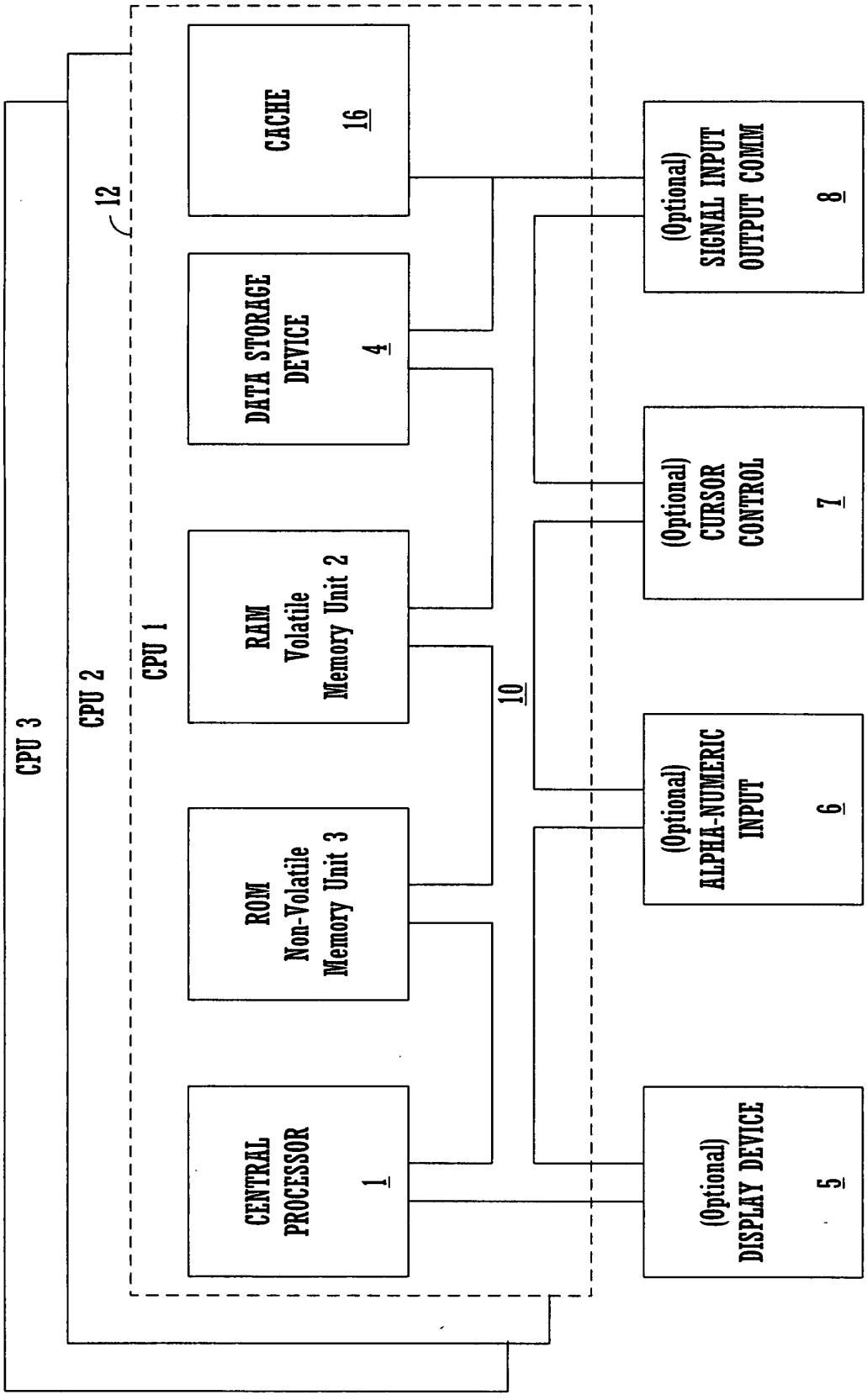

FIGURE 1

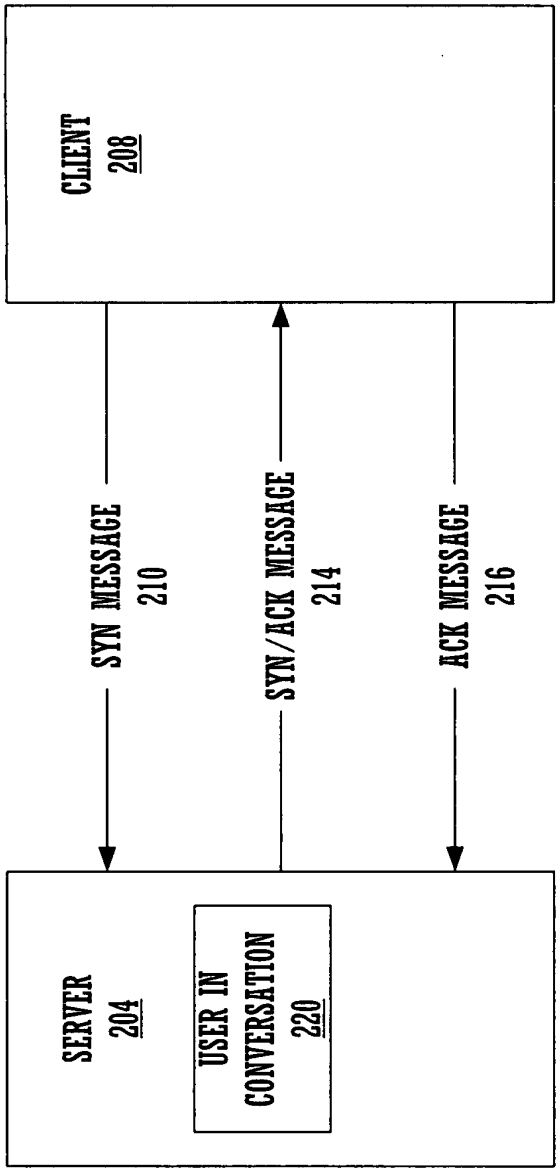
CLIENT
208
SYN MESSAGE
210
SYN/ACK MESSAGE
214
ACK MESSAGE
216
SERVER
204
USER IN CONVERSATION
220
200

FIGURE 2

300

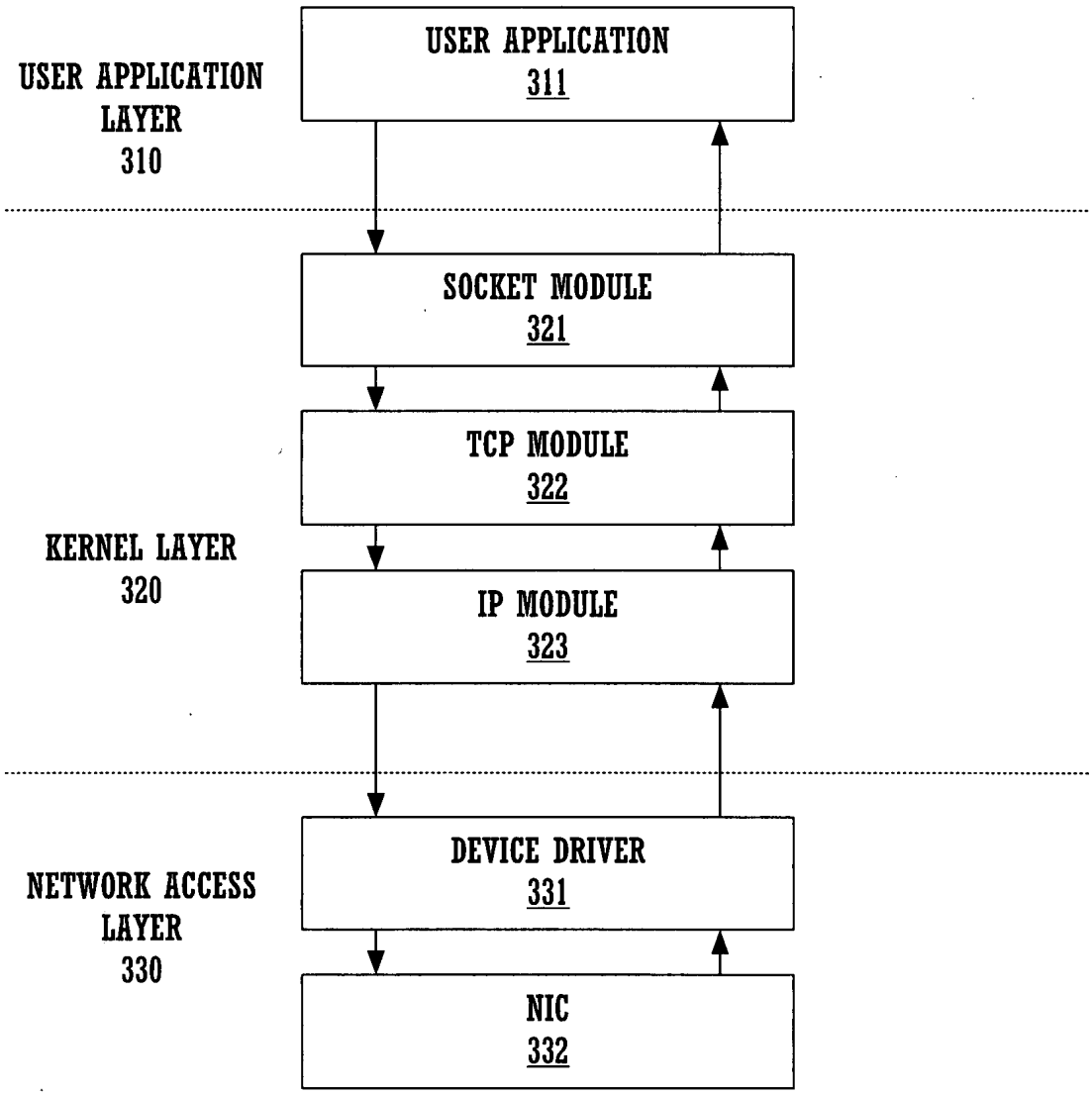
USER APPLICATION LAYER
310
USER APPLICATION
311
SOCKET MODULE
321
TCP MODULE
322
KERNEL LAYER
320
IP MODULE
323
NETWORK ACCESS LAYER
330
DEVICE DRIVER
331
NIC
332

FIGURE 3

400

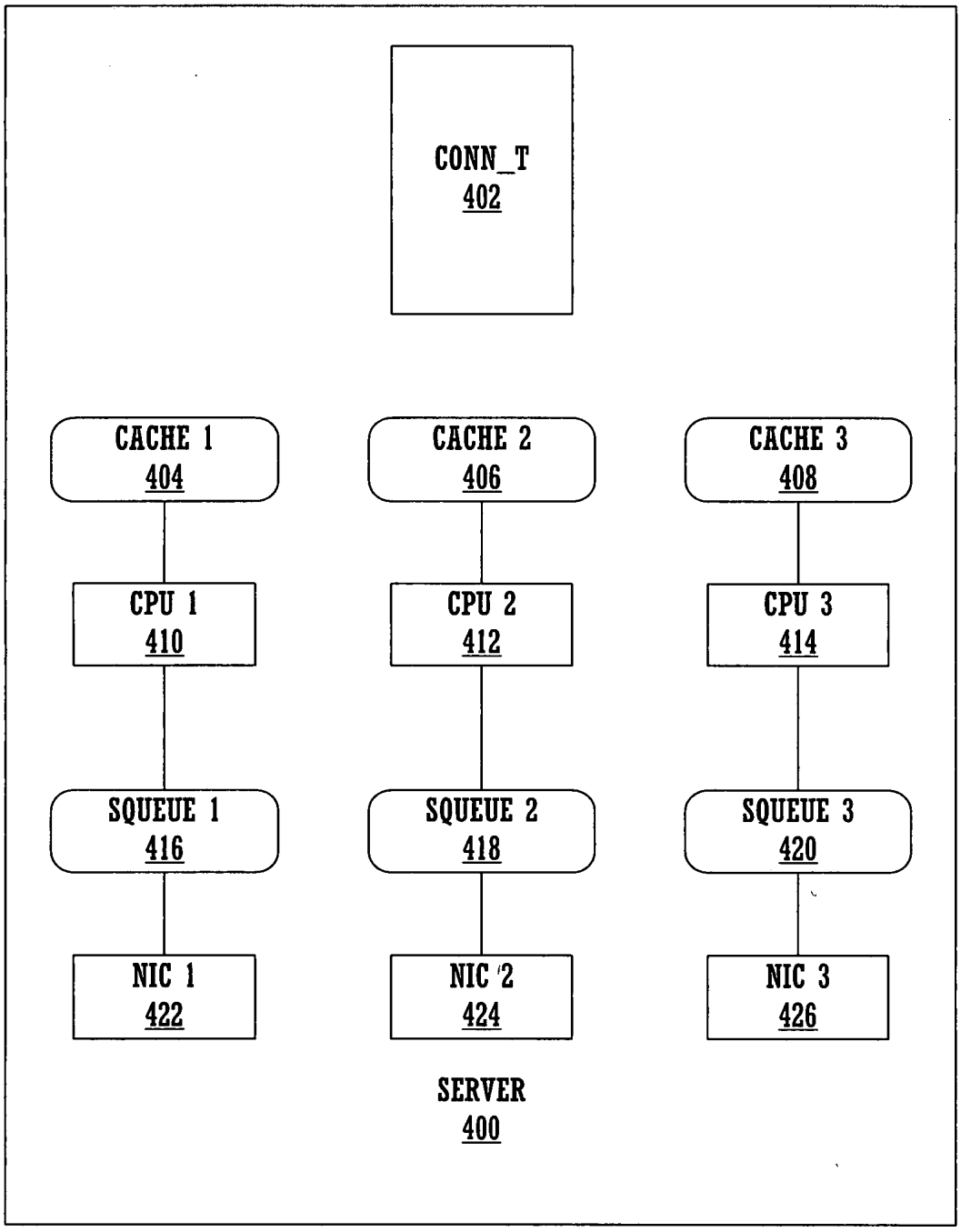
CONN_T
402
CACHE 1
404
CACHE 2
406
CACHE 3
408
CPU 1
410
CPU 2
412
CPU 3
414
SQUEUE 1
416
SQUEUE 2
418
SQUEUE 3
420
NIC 1
422
NIC 2
424
NIC 3
426
SERVER
400

FIGURE 4

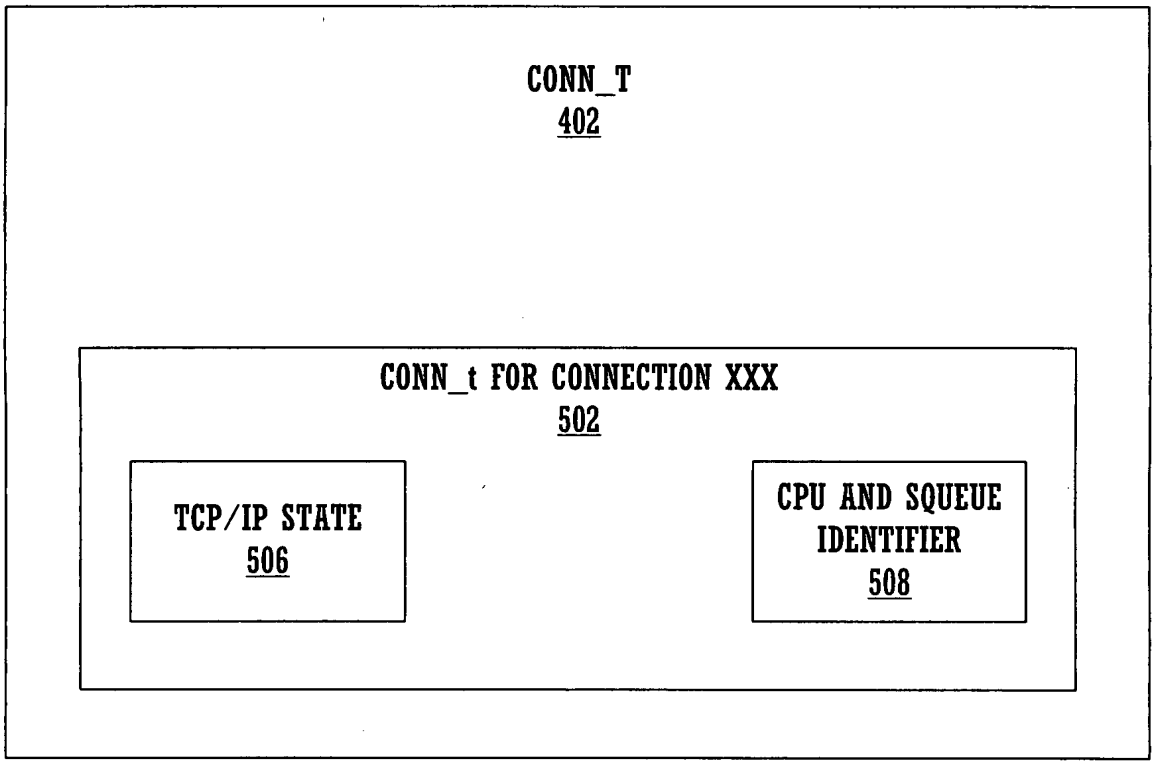
CONN_T
402
CONN_t FOR CONNECTION XXX
502
TCP/IP STATE
506
CPU AND SQUEUE IDENTIFIER
508

FIGURE 5

600a

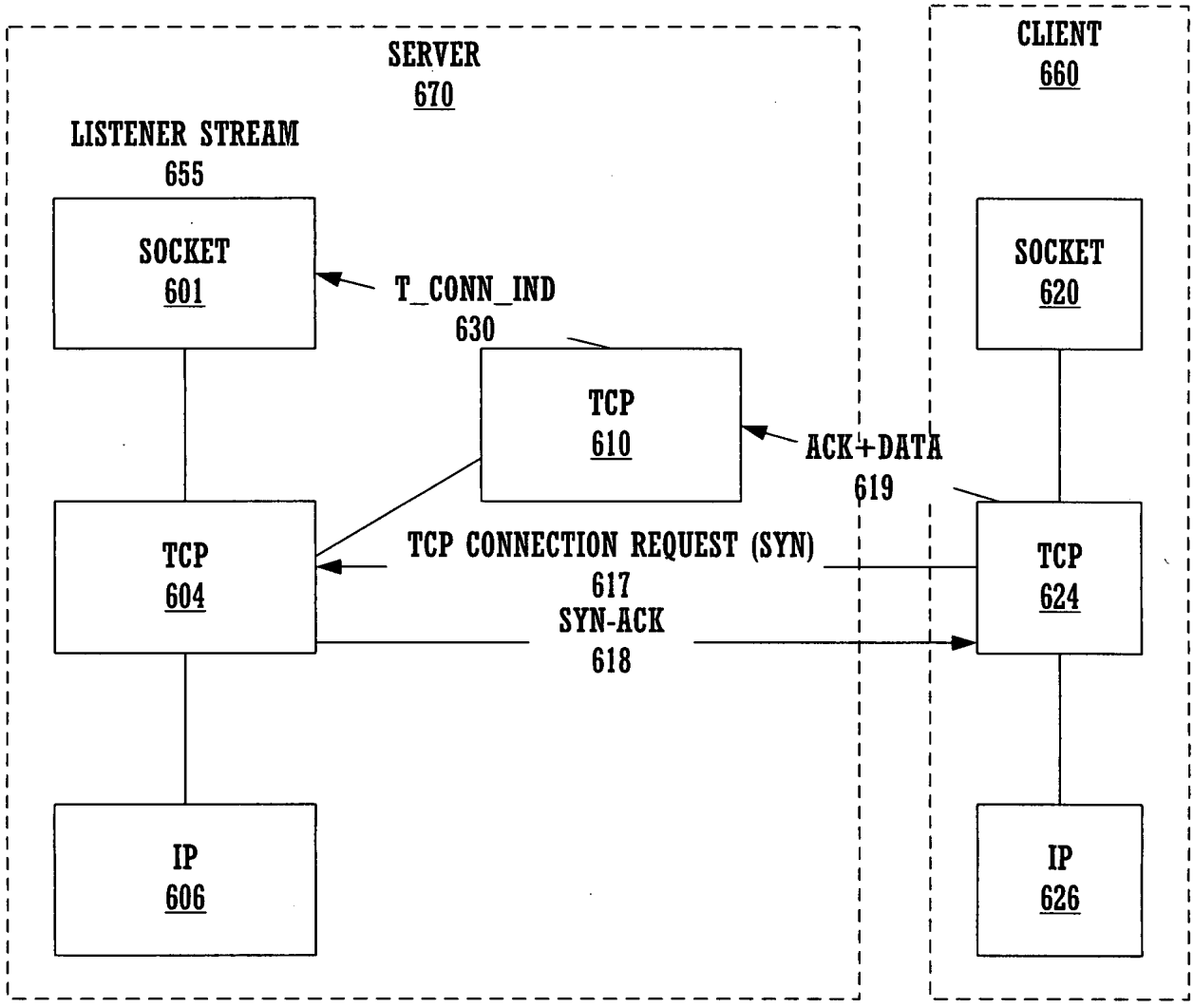

FIGURE 6A

600b

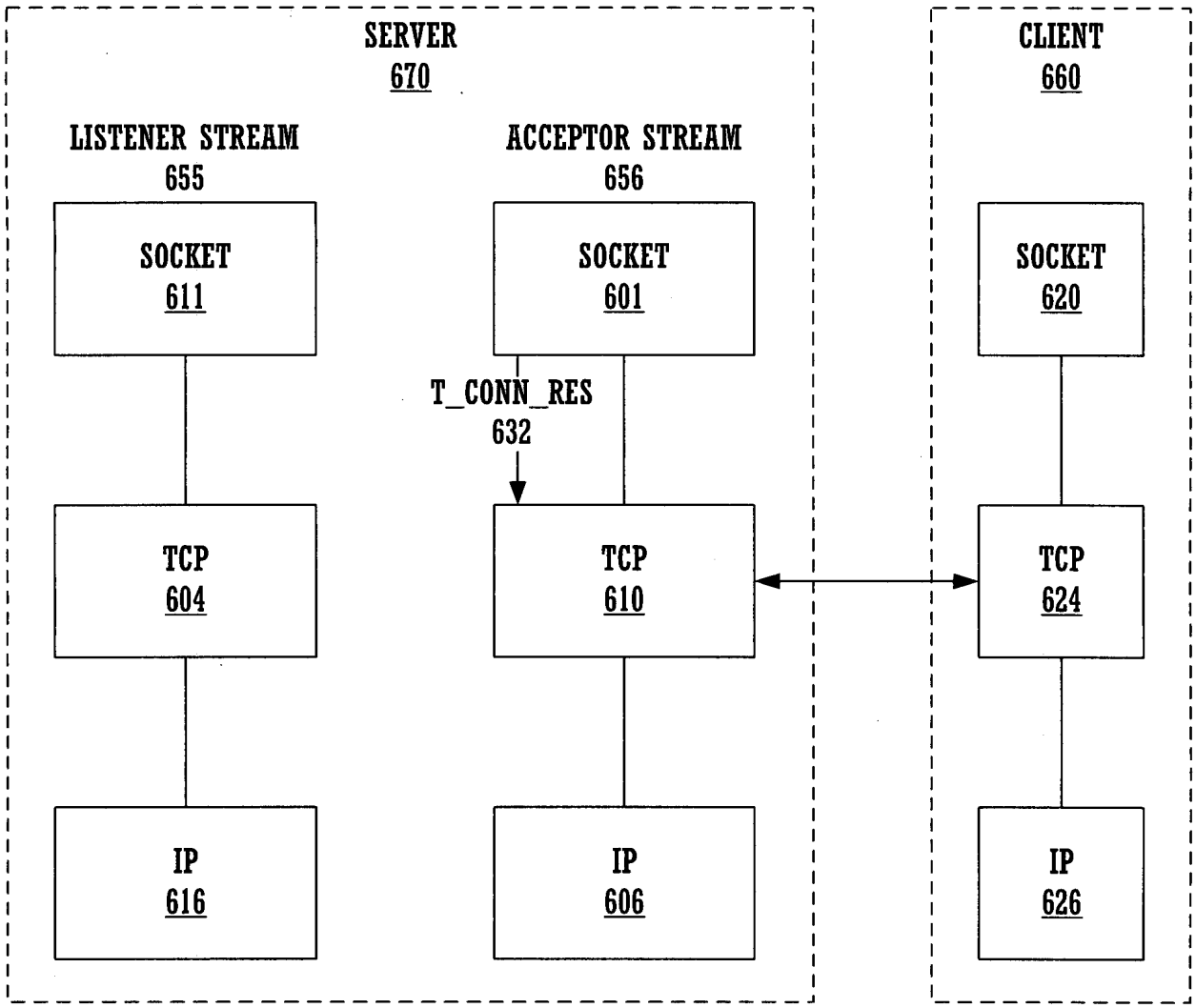

FIGURE 6B

700

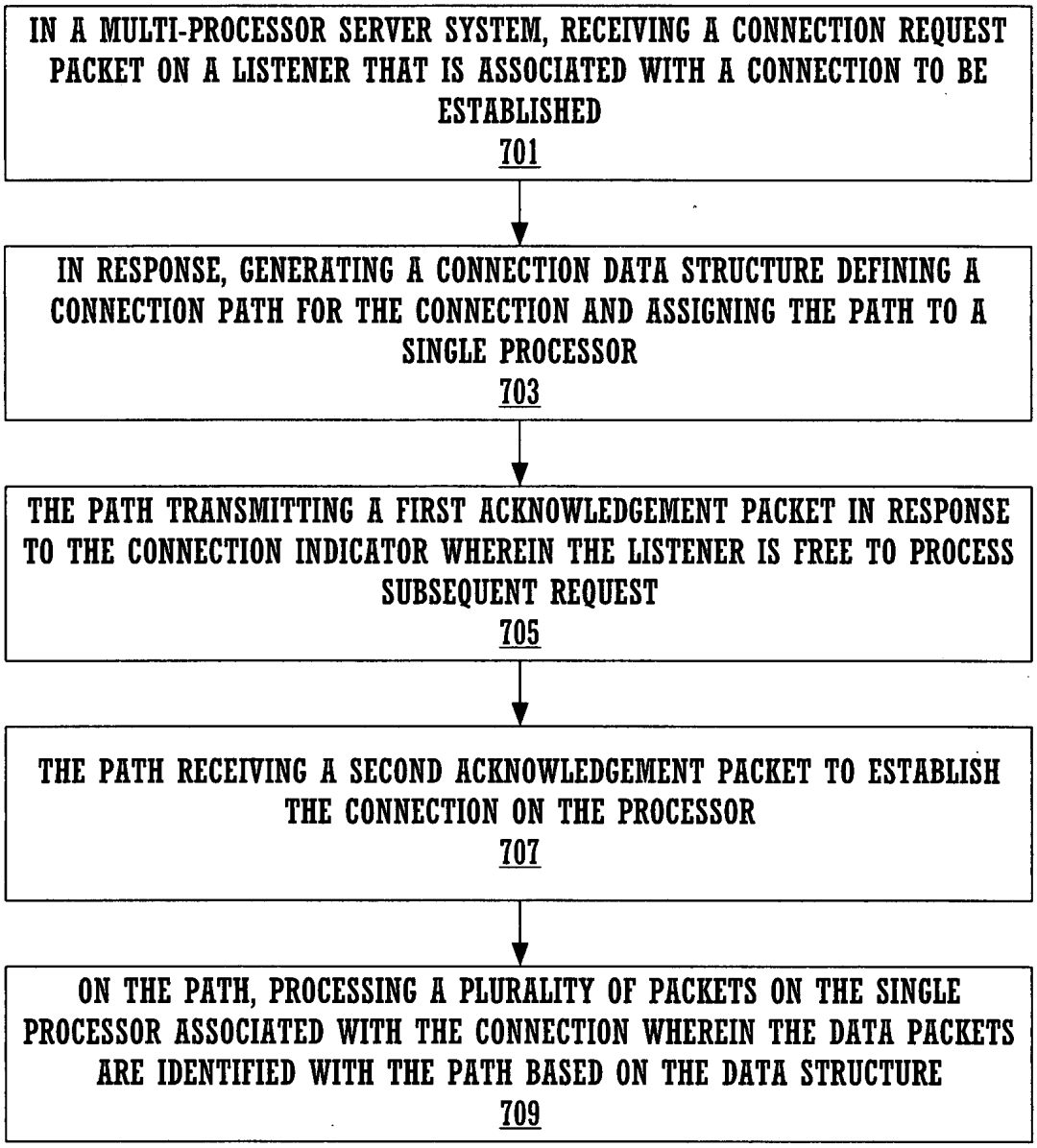
IN A MULTI-PROCESSOR SERVER SYSTEM, RECEIVING A CONNECTION REQUEST PACKET ON A LISTENER THAT IS ASSOCIATED WITH A CONNECTION TO BE ESTABLISHED
701
IN RESPONSE, GENERATING A CONNECTION DATA STRUCTURE DEFINING A CONNECTION PATH FOR THE CONNECTION AND ASSIGNING THE PATH TO A SINGLE PROCESSOR
703
THE PATH TRANSMITTING A FIRST ACKNOWLEDGEMENT PACKET IN RESPONSE TO THE CONNECTION INDICATOR WHEREIN THE LISTENER IS FREE TO PROCESS SUBSEQUENT REQUEST
705
THE PATH RECEIVING A SECOND ACKNOWLEDGEMENT PACKET TO ESTABLISH THE CONNECTION ON THE PROCESSOR
707
ON THE PATH, PROCESSING A PLURALITY OF PACKETS ON THE SINGLE PROCESSOR ASSOCIATED WITH THE CONNECTION WHEREIN THE DATA PACKETS ARE IDENTIFIED WITH THE PATH BASED ON THE DATA STRUCTURE
709

FIGURE 7